Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

General Notes.

PETROGRAPHY.[1]

Italian Petrography.—The third part of Washington's[2] paper on Italian petrography deals with the Bracciano, Cerveteri and Tolfa districts. The products of the Bracciano volcano may be separated into a leucitic and a non-leucitic group. The non-leucitic rocks contain orthoclase and basic plagioclase, in this respect resembling the vulsinites and the ciminites, but they are more acid than these types, containing sometimes as much as 72 per cent. of SiO_2 a part of which separates as quartz. They resemble the quartz-trachytes of Tuscany, and thus occupy the position in Brögger's classification reserved for the quartz-trachyte-andesites. The author calls the members of the group toscanites. The leucite rocks of this volcanic center embrace leucitites, leucite-tephrite and leucite-phonolite.

The rocks of the Cerveteri district are toscanites and leucitites, and of the Tolfa district, toscanites.

An analysis of the toscanite of Castle Hill, Tolfa, follows :

SiO_2	Al_2O_3	Fe_2O_3	FeO	MgO	CaO	Na_2O	K_2O	H_2O		Total
65.19	16.04	1.16	2.48	.99	2.92	2.26	6.11	1.85	=	99.00

The Quartz-Porphyry in the Ruhr Valley, Westphalia.—This rock has been described several times by geologists, but it has been reserved for Mügge[3] to investigate it microscopically. It occurs in massive and in schistose phases and in the form of a breccia associated with schists. The massive variety resembles, in many respects, a gneiss. It is banded in light and dark irregular bands. Spherulites united by what was once a glassy matrix marked by perlitic cracks constitute the groundmass in which phenocrysts of quartz and orthoclase are imbedded. The rock has suffered profound mechanical and chemical alterations. The quartz grains are crossed by fine lamellae extinguishing in different positions, and by others extinguishing nearly together. The latter are visible in ordinary light. They are phenomena of translation.[4] The groundmass is filled with tiny veins of quartz, stringers of a sericite-chlorite aggregate and nests of quartz and newly formed feldspar. The schistose porphyries differ from the more massive ones in the greater degree of their alteration. Analyses of the two types follow:

---

[1] Edited by Dr. W. S. Bayley, Colby University, Waterville, Me.

[2] Jour. of Geology, Vol. V, p. 34.

[3] Neues Jahrb. f. Min., etc., B. B. X, p. 757.

[4] Cf. Neues Jahrb. f. Minn., etc., 1892, II, p. 95, 98, 1895, p. 213.

	SiO_2	Al_2O_3	Fe_2O_3	FeO	CaO	MgO	K_2O	Na_2O	H_2O	Total
Massive	76.50	15.68	.78				1.10	4.92	.88	= 99.76
Schistose	72.08	16.15	2.21		.18	.68	5.23	.21	2.40	= 99.14

The porphyry breccias consist of fragments of porphyry and of schists in a foliated matrix composed largely of porphyry and schist débris. In origin they are believed to be reibung's-breccias formed at the juncture of schist and porphyry. The paper is handsomely illustrated with photo-lithographs of thin sections.

The Eclogite of the Fichtelgebirge.—Newland[5] gives a few notes on the eclogites comprising a portion of the central gneissic cone of the Bavarian Fichtelgebirge. Mineralogically, the eclogite is so varied in composition that the rock is very difficult to define. Its most characteristic component is garnet, but, in addition to this, it contains also omphacite, hornblende, cyanite, zoisite, sphene, andesine, muscovite, zircon, pyrites, magnetite, rutile, quartz, and a few other minerals. No olivine could be found in any of the sections, although it was searched for. The pyroxene, hornblende and feldspar are often arranged in intergrowths resembling granophyre, and the pyroxene or garnet is surrounded by a radial aggregate of feldspar, hornblende and omphacite, which, under low powers, looks like a reaction rim. Analyses of the rock indicate that it is nearly allied to certain types of eruptives. (I) represents the composition of the eclogite from Markt Schorgast, and (II) that of a diabase from Fichtelberg;

	SiO_2	Al_2O_3	Fe_2O_3	FeO	MnO	CaO	MgO	K_2O	Na_2O	H_2O	CO_2		Total
I.	48.81	16.25	6.00	7.48	.43	9.72	7.12	.46	2.64	.12		=	99.03
II.	47.60	15.29	7.09	6.87	.12	8.41	6.48	1.40	3.62	2.14	.16	=	99.18

Nodular Granite from Finland.—Frosterus[6] describes a new nodular granite from Kangasnierni Parish in Finland. The rock was found as boulders in morainal deposits. It is a biotite-granite in which the nodules are thickly strewn. Each nodule is composed of three quite distinct parts—an inner nucleus of biotite, sometimes with a fragmental outline, surrounded by a zone of coarse granite and an outer zone of fine-grained granite. Outside of these are several distinct envelopes, the inner of which consists principally of feldspar and the outer of biotite and feldspar. In the envelopes the feldspar is radially arranged. The author describes in detail the features of the different portions of the nodules and illustrates them with some handsome figures. The central parts of the nodules are believed to be inclusions of gneiss that have been affected by magmatic alterations. Surrounding these is a zone composed of a coarse aggregate of andesine, quartz, microline and other components of a normal granite, next a zone of a fine grained and radial aggregate of biotite, plagioclase, orthoclase and quartz, and finally the concentric shells. The zones surrounding the nucleus are thought to be due to contact action between the granite and the included gneiss. The inner concentric shell is composed of plagioclase, quartz, orthoclase and biotite on the inner side and principally microcline on the outer side. The outer shell is fine grained, and is composed of biotite, orthoclase, plagioclase and quartz. The rock surrounding the nodules possesses no special features different from those of normal granitites. Its material grades into that of the nodules.

---

[5] Trans. N. Y. Ac. Sciences, Oct., 1896, p. 24.

[6] Bull. Com. Geol. d. la Finlande, No. 4, p. 1.

Analyses show clearly an increase in acidity from center to periphery of the nodules, which are, on the whole, more acid than the mother-rock. After discussing the origin of similar structural phenomena in other rocks, the author concludes that the nodules in the Finland granite are due to crystallization around the centers of crystallization afforded by the inclusions of gneiss.

Volcanic Ash from the North Shore of Lake Superior.—N. H. Winchell and U. S. Grant[7] report the existence of volcanic ashes in the Keweenawan series near Duluth. The rocks in question resemble fine grained impure sandstone. They are associated with diabases, basalts and rhyolites. In thin section they are found to be composed of fragments, apparently of vesicular lavas, in a matrix consisting of a secondary aggregate of quartz, feldspar, chlorite, epidote, calcite and iron oxides. A few of the fragments show traces of perlitic parting.

The Diabases of Goslar.—The diabases in the middle Devonian schists of Goslar in the Harz are discussed by Rinne.[8] The rocks are always in the form of sheets interleaved with the schists. Most of these are intrusive, but, in a few instances, volcanic bombs and other evidences of the presence of surface volcanic products indicate the existence of active volcanoes in the district, though diabase tuffs have not been found. From the general appearance of the upper surface of some of the sheets there can be no doubt but that they were lavas.

---

[7] Amer. Geol., Vol. XVIII, p. 211.

[8] Neues Jahrb. f. Min., etc., B. B. X, p. 363.

The bombs are found strewn through the schists associated with the diabase. Their macroscopic features are carefully described with the aid of a number of figures. Some of the sheets are porphyritic with phenocrysts of irregularly outlined oligoclase surrounded by micas in a groundmass with the composition of normal diabase. The augite in this groundmass is sometimes idiomorphic, and in nearly all cases it is bordered by a rim of hornblende; often the hornblende replaces feldspar laths embedded in the pyroxene, forming of them complete pseudomorphs. The augite is replaced by calcite in some specimens, and by chlorite in others.

The four structural types recognized by the author are: compact gabbroitic phases, compact ophitic varieties, compact porphyritic kinds and amygdaloidal varieties. The gabbroitic diabases are all gabbro-like in the land specimen. In thin section the feldspar grains break up into an aggregate of feldspar laths. The ophitic diabases present no unusual features except that in the coarse grained varieties the large feldspar grains are filled with inclusions of the other components. The amygdaloids are sometimes porphyritic, more frequently normal. On the contact between the diabase and the schists, both rocks have suffered from the effects of contact action. The diabase is much denser near the contact than at a greater distance from it, and in places is much altered, quartz being an abundant product of this alteration The schists, which are mainly roofing slates, are crystallized near their contact with the eruptives.

MINERALOGY.[1]

The Production of Precious Stones in 1895.—Under this title Kunz[2] reviews the chief features of the gem industry for the year, giving specially copious details concerning the American production.

A six-carat diamond was found at Saukville, Wis., six miles from Milwaukee. In California several diamonds were found, one at Alpine Creek, Tulare Co., five near Oroville, Butte Co., and about as many more from near the "head of the creek," probably referring to one of the sources of the Feather River. From the association with peridotite, it seems probable that more may be found in this region.

In South Africa the De Beers Company produced diamonds to the value of about $15,000,000 in the year ending July 1, 1895, and the

---

[1] Edited by Prof. A. C. Gill, Cornell University, Ithaca, N. Y.

[2] Seventeenth Annual Report of the U. S. Geol. Survey, 1896, pp. 895–926.